

**VERY HIGH SPEED PAGE OPERATIONS IN
INDIRECT ACCESSED MEMORY SYSTEMS**

ABSTRACT OF THE DISCLOSURE

A computing system and method employing a processor device for generating real addresses associated with memory locations of a real memory system for reading and writing of data thereto, the system comprising: a plurality of memory blocks in the real memory system for storing data, a physical memory storage for storing the pages of data comprising one or more real memory blocks, each real memory block partitioned into one or more sectors, each comprising contiguous bytes of physical memory; a translation table structure in the physical memory storage having entries for associating a real address with sectors of the physical memory, each translation table entry including one or more pointers for pointing to a corresponding sector in its associated real memory block, the table accessed for storing data in one or more allocated sectors for memory read and write operations initiated by the processor; and, a control device for directly manipulating entries in the translation table structure for performing page operations without actually accessing physical memory data contents. In this system, the actual data of the pages involved in the operation are never accessed by the processor and therefore is never required in the memory cache hierarchy, thus eliminating the cache damage normally associated with these block operations. Further the manipulation of the translation table will involve reading and writing a few bytes to perform the operation as opposed to reading and writing the hundreds or thousands of bytes in the pages being manipulated.